AE-T100 Micro Turbine
Natural Gas

DATA SHEET

General

Installation	Indoor / Outdoor
Size (WxHxL)	900 x 1810 / 2410* x 2770 mm (P) - 900 x 1810 / 2410* x 3900 mm (CHP)
Weight	2250 / 2750* kg (P) - 2770 / 3100* kg (CHP)
Fuel	Natural Gas (methane)

(*) indoor / outdoor layout

Microturbine

Compressor type	Centrifugal, single stage
Turbine type	Radial, single stage
Type /Number of combustion chambers	Lean premix / 1 chamber CAN Type
Pressure in combustion chamber	4.5 bar(a)
Turbine Inlet Temperature (TIT)	950 °C
Number of shafts	1 (single shaft)
Nominal rotational speed	70000 RPM
Lubrication oil consumption	< 3 l/6000 h

Electrical data

Frequency output	400/230 V AC, 50 Hz (60 Hz on request)
Voltage output	400 V (AC), three phases

Fuel requirements

Required pressure	(0.02 ÷ 0.5) bar(g)
Required temperature	(0 ÷ 60) °C
Lower Heating Value (LHV)	(38 ÷ 50) MJ/kg*
Consumption	333 kWth ≈ 34 Nm^3/h*

(*) depending on fuel LHV

Performances

Electrical output	(100 ± 3) kWel
Electrical Efficiency	(30 ± 2) %
Exhaust gas flow	≈ 0.80 kg/s
Exhaust gas temperature	270 °C
Sound Power	85,4 dB(A)

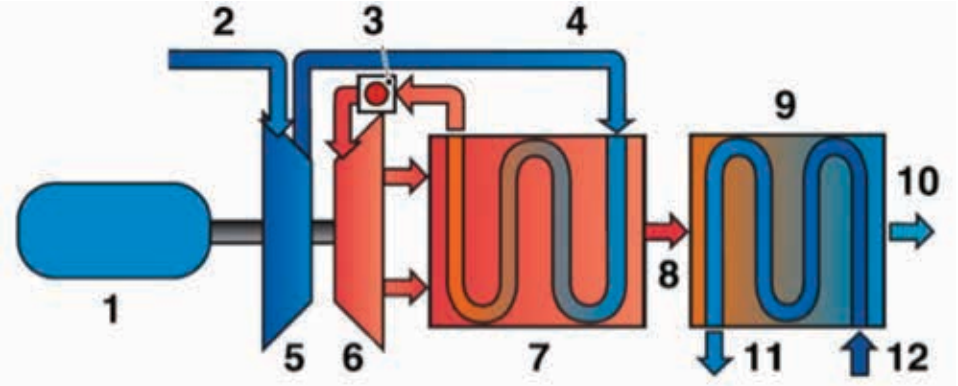
Emissions *(@ Full load and 15% O2)*

NOx	< 15 ppm(v) = 32 mg /MJth(fuel)
CO	< 15 ppm(v) = 18 mg/MJth(fuel)

Versions

	Power only (P)
	Co-generation (CHP)
	Tri-generation (CCHP)

(Data provided by Ansaldo Energia S.p.A. for reference only)



1	Generator	**7**	Recuperator
2	Inlet air	**8**	Exhaust gases outlet / connection
3	Combustor chamber	**9**	Exhaust gas - hot water heat exchanger (CHP)
4	Air to recuperator	**10**	Exhaust gas outlet
5	Compressor	**11**	Hot water outlet (CHP)
6	Turbine	**12**	Hot water inlet (CHP)

The natural gas version of AE-T100 represents the standard micro turbine product and it is used in most of current installations.

Industrial Application

- Food industries
- Ovens
- Leisure centres,
- Hospitals,
- Brickyards
- Painting plants
- Chemical & Petrolchemical
- Plants
- Industrial laundries

Civil Application

- Retirement Houses
- Hospitals
- Swimming pools
- Hotels
- Leisure centres
- Apartment buildings

The low maintenance requirements of the AE-T100, with service intervals of 6000 equivalent operating hours, makes this power generation system extremely attractive and competitive when compared to more conventional solutions.

Each AE-T100 configuration can be delivered in specific layouts for indoor or outdoor installation. Both layouts meet current regulations limits for noise and emissions.

All AE-T100 can be remotely monitored, controlled and operated.

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